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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,252	11/16/2001	Mohamed Khalil	P1020 (13918RRUS01U)	5357

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EXAMINER

SOL, ANTHONY M

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,252

Applicant(s)

KHALIL ET AL.

Examiner

Anthony Sol

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2-20-2002</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 8 and 9 recite the limitation "the link-layer sub-type". There is insufficient antecedent basis for this limitation in the claim. The claim will be treated as if the applicant intended to say -- the sub-type --.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6 and 9-20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,804,221 B1 ("Magret").

Regarding claim 1, 9 and 17,

Magret shows in Fig. 5 a home or foreign topology. Specifically, in Figs. 7 and 8, a foreign (Claim 9: first communication network) and home networks are shown, respectively (Claim 1: home and foreign networks). Magret further shows in Fig. 1, the format used for the mobile node advertisement message. Magret discloses a base station (BS) 210 sending this message (Claims 1 and 9: information packet transmitted) to its BSR 220 whenever the BS 210 discovers

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that a new mobile node has entered its coverage area. The message includes a list of link layer information of all the mobile nodes currently attached to the base station (Claim 1: associated link-layer addresses, claim 9: connecting a mobile node to said first network through physical connectivity and a link-layer address) (Col. 9, lines 41-48). Fig. 1 further shows a "TYPE" data field, "Length of One Item" (Length) data field, "Sub-Type" data field and a "One or More Link-Layer Specific Information" (link-layer address) data field (Claims 1, 9 and 17: generalized link-layer address extension that has a type, length, sub-type, and link-layer address data fields).

4. Regarding claims 2 and 10,

Magret discloses a system and method that covers all the limitations of the parent claim.

Magret shows in Fig. 1, the format used for the mobile node advertisement message. Magret discloses a base station (BS) 210 sending this message to its BSR 220 whenever the BS 210 discovers that a new mobile node has entered its coverage area. The message includes a list of link layer information of all the mobile nodes currently attached to the base station (link-layer address changes as that mobile node moves to another network) (Col. 9, lines 41-48).

5. Regarding claims 3-5, 11-12, 14 and 19,

Magret discloses a system and method that covers all the limitations of the parent claim.

Magret discloses when entering a foreign network, a mobile node registers its location. When a mobile node enters the coverage area of a base station router 1 (Fig. 5), the link layer protocol at the base station (BS) 210 serving the mobile node 200 triggers the emission of the mobile node advertisement message (Claim 11: mobile node receives the first information packet). The BS 210 uses the mobile node advertisement message to inform its BSR 220 of the entrance of a mobile node in the cell. The BSR 220 will act on the presence of the link layer information of the mobile node (Claim 3: assigned link-layer address) in its caches (Col.11, lines 22-39). See Fig. 6 for a flow chart of the steps involved in registering a mobile in a foreign domain.

Magret discloses that the mobile node sends a mobile IP registration request to the base station router 220. The BSR 220 adds its IP address to the mobile node registration request and forwards it to its MAR 230 (Claim 4: mobile node informs one of said networks of its assigned link-layer address, claim 12: mobile node transmits the first information packet) (Col. 11, lines 57-61). The MAR 230 shares information with the correspondent node 320 of Fig. 7 (Claim 5: information packet informs a correspondence node of an assigned link-layer address, claim 14: providing a corresponding node with a communication link to the mobile node and receiving the first communication packet at correspondence node, claim 19: mobile node includes a correspondence node).

6. Regarding claims 6 and 18,

Magret discloses a system that covers all the limitations of the parent

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claim.

Magret discloses that the packets addressed to a mobile node in a foreign domain 300 (Fig. 7) are routed with a tunneling method to the mobile node using a link layer protocol (link-layer address) (Col. 13, lines 44-64, col. 14, lines 28-29).

7. Regarding claim 13,

Magret discloses a method that covers all the limitations of the parent claim.

Magret shows in Fig. 5 a home or foreign topology. Specifically, in Figs. 7 and 8, a foreign (first communication network) and a home (second communication network) networks are shown, respectively. Magret discloses that when entering a foreign domain 300, a mobile node registers its location. Registration is the process by which the mobile node informs the home agent about its current care-of address (receiving the first information packet at said second communication network about the physical connectivity of said mobile node).

8. Regarding claim 15,

Magret discloses a method that covers all the limitations of the parent claim.

Magret discloses that a mobile node sends a mobile node registration

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request to the base station router (receiving the first information packet at said router) (Col. 11, lines 57-59).

9. Regarding claims 16 and 20,

Magret discloses a system and method that covers all the limitations of the parent claim.

Magret discloses that BSR 220 of Fig. 5 processes the multicast address extension following the mobile registration reply. In addition, the BSR periodically sends a neighbor binding update or update message (update a data table).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magret in view of U.S. Patent No. 6,389,023 B1 ("Matsuzawa").

Magret discloses a system that covers all the limitations of the parent claim.

Magret does not disclose that the sub-type field includes a transmission protocol designation nor system type designation.

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Matsuzawa shows in Fig. 1D, a MAC frame format 122 on ethernet (Claim 8: system type designation) with a protocol identifier field (Claim 7: protocol designation).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention was made to modify the sub-type field of Magret to include a protocol designation or a system type designation of Matsuzawa. One skilled in the art would have been motivated to combine Magret with Matsuzawa (collectively "Magret-Matsuzawa") to generate the claimed invention with a reasonable expectation of success.

Conclusion


12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Sol whose telephone number is (571) 272-5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Anthony Sol
Examiner
Art Unit 2662
7/7/2005



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